



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
RISK REDUCTION ENGINEERING LABORATORY
CINCINNATI, OHIO 45268

February 24, 1995

REPLY TO:
Releases Control Branch
U.S. EPA (MS-104)
2890 Woodbridge Avenue
Edison, N.J. 08837

MEMORANDUM

SUBJECT: Pre-Final Construction Review of SVE System
Carrier Plant, Collierville, Tennessee, EPA Region IV

FROM: Chi-Yuan Fan *Chiyuan*
Environmental Engineer, Releases Technology Section,
RCB
Superfund Technology Demonstration Division

TO: Joan Mattox
Technical Support Branch
Superfund Technology Demonstration Division

Per Beth Brown's request through your office, I attended a project review meeting at the Carrier's facility in Collierville, Tennessee on 23rd February 1995. Attached are copies of the meeting agenda and the following topics that were discussed during the review meeting:

- o Suggested checklist for conducting SVE system post-construction inspection at Carrier Collierville site.
- o SVE process and instrumentation diagram (Figure 1: P&ID).
- o SVE system installation (Figure 2).

The suggested checklist was based on the information provided on the P&ID (attached Figure 1). The list was distributed and discussed extensively during the meeting. EnSafe will finalize the listed items to reflect the actual installation. The vapor sampling and flow measurement ports at each wellhead have not yet installed at present time. For SVE performance monitoring and verification soil samples, it was suggested that two sampling locations (SS1 and SS2) as shown on Figure 2 be conducted at depth of 4, 8, 12, and 15 ft below ground surface. The SVE system was not operatable at this time, and a post-construction inspection was re-scheduled for 3/20/95.

Attachments

cc: Beth Brown



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OPTIONAL FORM 88 (7-80)

FAX TRANSMITTAL

• of pages ► 8

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NSN 7540-01-317-7886

5099-101

GENERAL SERVICES ADMINISTRATION

P. 02/02

Location Carrier Collierville Plant

[illegible]

**SUGGESTED CHECKLIST FOR CONDUCTING
SVE SYSTEM POST-CONSTRUCTION INSPECTION AT
CARRIER COLLIERSVILLE SITE
MAIN PLANT AREA**

Date: / / Inspector(s):

<u>Time</u>	<u>Inspected Item</u>	<u>Remarks</u>
	<u>Emission Stack</u>	
	<u>Sampling port No.</u>	
	<u>Temp. indicator No.</u>	
	<u>Regenerative Blower</u>	<u>vibration/level</u>
	<u>Electric motor</u>	<u>rotation speed: rpm</u>
	<u>Control system</u>	<u>auto/manual override</u>
	<u>Vacuum relief valve</u>	<u>auto-vacuum break setting</u>
	<u>Air inlet valve No.</u>	<u>type: </u>
	<u>Vacuum gauge No.</u>	<u>range: - mm Hg/in H2O</u>
	<u>Particulate Filter</u>	
	<u>Vacuum gauge No.</u>	<u>range: - mm Hg/in H2O</u>
	<u>Activated Carbon Unit 1</u>	<u>capacity: lb/AC type: </u>
	<u>Activated Carbon Unit 2</u>	<u>capacity: lb/AC type: </u>
	<u>Vacuum gauge No.</u>	<u>range: - mm Hg/in H2O</u>
	<u>Sampling port No.</u>	
	<u>Sampling port No.</u>	
	<u>Electric Heater</u>	<u>output: BTU/hr. kw</u>
	<u>Temp. indicator/contr.</u>	<u>temp.setting: F/C local</u>
		<u>temp.setting: F/C panel</u>
	<u>Flow Meter</u>	<u>flowrate range: - scfm</u>
	<u>Flow indicator No.</u>	<u>range: - scfm</u>
	<u>Vacuum gauge No.</u>	<u>range: - mm Hg/in H2O</u>
	<u>Moisture Separator</u>	<u>capacity: gal./cu.m.</u>
	<u>Water level indicator</u>	<u>local</u>
		<u>panel high level alarm</u>
	<u>Vacuum gauge No.</u>	<u>range: - mm Hg/in H2O</u>
	<u>Deep Extraction Well</u>	<u>No. SVE-1B</u>
	<u>Valve No.</u>	<u>type: </u>
	<u>Vacuum gauge No.</u>	<u>range: - mm Hg/in H2O</u>
	<u>Sampling port No.</u>	
	<u>Flow measur.port No.</u>	

**SUGGESTED CHECKLIST FOR CONDUCTING
SVE SYSTEM POST-CONSTRUCTION INSPECTION AT
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MAIN PLANT AREA**

Date: ____/____/____

Inspector(s): _____

<u>Time</u>	<u>Inspected Item</u>	<u>Remarks</u>
	Shallow Extraction Well	No. SVE-2F
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Shallow Extraction Well	No. SVE-2A
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Shallow Extraction Well	No. SVE-2B
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Shallow Extraction Well	No. SVE-2C
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Shallow Extraction Well	No. SVE-2D
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	

**SUGGESTED CHECKLIST FOR CONDUCTING
SVE SYSTEM POST-CONSTRUCTION INSPECTION AT
CARRIER COLLIERSVILLE SITE
MAIN PLANT AREA**

Date: / / Inspector(s):

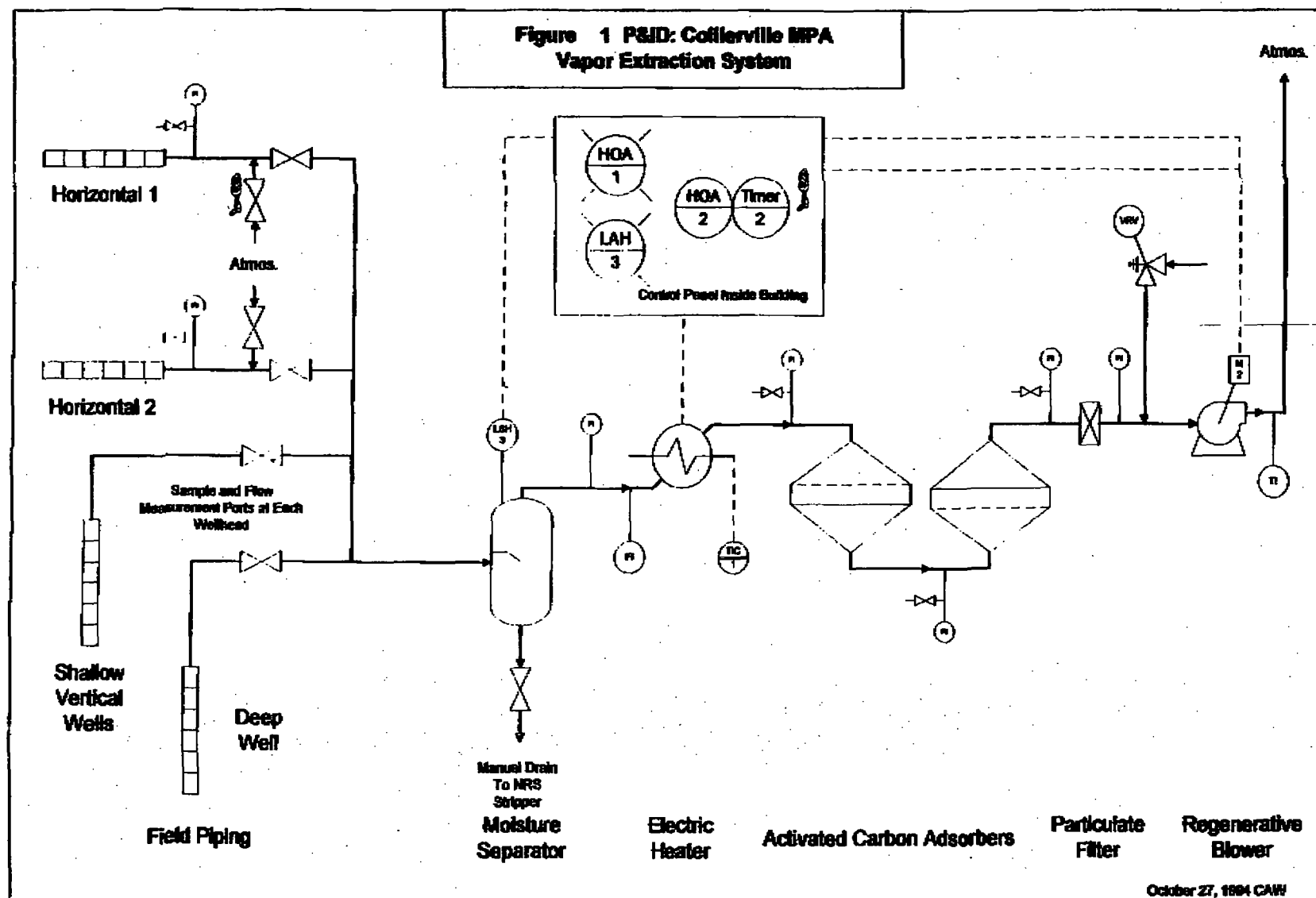
Time	Inspected Item	Remarks
	Shallow Extraction Well	No. SVE-2E
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Horizontal Extract.Well	No. SVE-1H
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Air inlet valve No.	
	Horizontal Extract.Well	No. SVE-2H
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Air inlet valve No.	
	Control Panel	
	Electric motor	
	In-line heater	temperature
	Water level	
	Monitoring Well/Point #	
	Pressure monitoring	
	Sampling port	
	Monitoring Well/Point #	
	Pressure monitoring	
	Sampling port	
	Monitoring Well/Point #	
	Pressure monitoring	
	Sampling port	

**SUGGESTED CHECKLIST FOR CONDUCTING
SVE SYSTEM POST-CONSTRUCTION INSPECTION AT
CARRIER COLLIERSVILLE SITE
MAIN PLANT AREA**

Date: ____/____/____

Inspector(s): _____

<u>Time</u>	<u>Inspected Item</u>	<u>Remarks</u>
_____	<u>Monitoring Well/Point #</u>	_____
_____	<u>Pressure monitoring</u>	_____
_____	<u>Sampling port</u>	_____
_____	<u>Monitoring Well/Point #</u>	_____
_____	<u>Pressure monitoring</u>	_____
_____	<u>Sampling port</u>	_____
_____	<u>Monitoring Well/Point #</u>	_____
_____	<u>Pressure monitoring</u>	_____
_____	<u>Sampling port</u>	_____
_____	<u>Monitoring Well/Point #</u>	_____
_____	<u>Pressure monitoring</u>	_____
_____	<u>Sampling port</u>	_____
_____	<u>Monitoring Well/Point #</u>	_____
_____	<u>Pressure monitoring</u>	_____
_____	<u>Sampling port</u>	_____



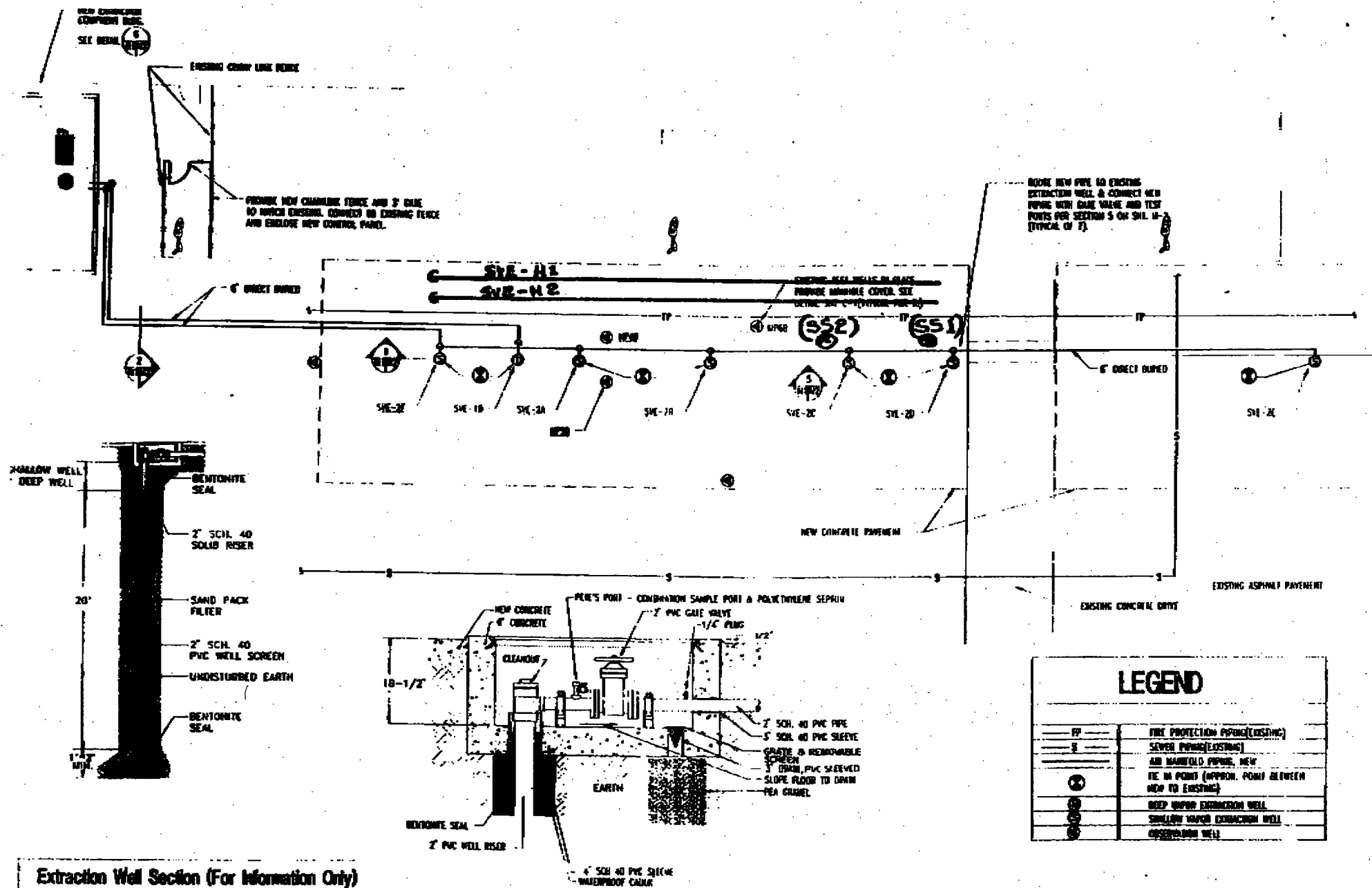


Figure 2: SVE System Installation

SUGGESTED CHECKLIST FOR CONDUCTING

SVE SYSTEM POST-CONSTRUCTION INSPECTION AT CARRIER COLLIERVILLE SITE MAIN PLANT AREA

Date: ____/____/____

Inspector(s): _____

Time	Inspected Item	Remarks
	Emission Stack	
	Sampling port No.	
	Temp. indicator No.	
	Regenerative Blower	vibration/level
	Electric motor	rotation speed: rpm
	Control system	auto/manual override
	Vacuum relief valve	auto-vacuum break setting
	Air inlet valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Particulate Filter	
	Vacuum gauge No.	range: - mm Hg/in H2O
	Activated Carbon Unit 1	capacity: lb/AC type:
	Activated Carbon Unit 2	capacity: lb/AC type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Sampling port No.	
	Electric Heater	output: BTU/hr. kw
	Temp. indicator/contr.	temp.setting: F/C local
		temp.setting: F/C panel
	Flow Meter	flowrate range: - scfm
	Flow indicator No.	range: - scfm
	Vacuum gauge No.	range: - mm Hg/in H2O
	Moisture Separator	capacity: gal./cu.m.
	Water level indicator	local
		panel high level alarm
	Vacuum gauge No.	range: - mm Hg/in H2O
	Deep Extraction Well	No. SVE-1B
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	

**SUGGESTED CHECKLIST FOR CONDUCTING
SVE SYSTEM POST-CONSTRUCTION INSPECTION AT
CARRIER COLLIERVILLE SITE
MAIN PLANT AREA**

Date: ____/____/____

Inspector(s): _____

<u>Time</u>	<u>Inspected Item</u>	<u>Remarks</u>
	Shallow Extraction Well	No. SVE-2F
	Valve No.	type: _____
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	_____
	Flow measur.port No.	_____

	Shallow Extraction Well	No. SVE-2A
	Valve No.	type: _____
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	_____
	Flow measur.port No.	_____

	Shallow Extraction Well	No. SVE-2B
	Valve No.	type: _____
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	_____
	Flow measur.port No.	_____

	Shallow Extraction Well	No. SVE-2C
	Valve No.	type: _____
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	_____
	Flow measur.port No.	_____

	Shallow Extraction Well	No. SVE-2D
	Valve No.	type: _____
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	_____
	Flow measur.port No.	_____

SUGGESTED CHECKLIST FOR CONDUCTING

SVE SYSTEM POST-CONSTRUCTION INSPECTION AT CARRIER COLLIERSVILLE SITE MAIN PLANT AREA

Date: ____/____/____

Inspector(s): _____

Time	Inspected Item	Remarks
	Shallow Extraction Well	No. SVE-2E
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Horizontal Extract.Well	No. SVE-1H
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Air inlet valve No.	
	Horizontal Extract.Well	No. SVE-2H
	Valve No.	type:
	Vacuum gauge No.	range: - mm Hg/in H2O
	Sampling port No.	
	Flow measur.port No.	
	Air inlet valve No.	
	Control Panel	
	Electric motor	
	In-line heater	temperature
	Water level	
	Monitoring Well/Point #	
	Pressure monitoring	
	Sampling port	
	Monitoring Well/Point #	
	Pressure monitoring	
	Sampling port	
	Monitoring Well/Point #	
	Pressure monitoring	
	Sampling port	

